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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HUBERT SCHALK

Appeal 2009-003768
Application 10/816,524
Technology Center 3700

Decided: March 29, 2010

Before JENNIFER D. BAHR, MICHAEL W. O'NEILL, and
KEN B. BARRETT, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Hubert Schalk (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision finally rejecting claims 1, 2, 8, and 14-19 under 35 U.S.C. § 103(a) as obvious over Schmidt (US 1,471,755, issued Oct. 23,

1923) in view of Turner (US 4,811,688, issued Mar. 14, 1989); claim 5 under 35 U.S.C. § 103(a) as obvious over Schmidt in view of Turner, and further in view of Ryser (US 6,527,029 B1, issued Mar. 4, 2003); and claims 10-13 under 35 U.S.C. § 103(a) as obvious over Schmidt in view of Turner, and further in view of Petrzela (US 5,118,214, issued Jun. 2, 1992). We have jurisdiction under 35 U.S.C. § 6(b). We REVERSE.

The Invention

The claims on appeal relate to a folding device with a folding drum for producing the second longitudinal fold in products of a rotary press. Spec. 2, para. [0001].

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A folding device for producing a second longitudinal fold in products of a rotary press, comprising:

- a folding drum comprising two opposing side walls and a carrier connected to the folding drum at a location between said side walls, wherein said carrier has a small material thickness in a longitudinal direction of said folding device and a large area extending approximately over an entire cross section of an interior of said folding drum in a transverse direction of said folding device;

- a folding-blade shaft having two ends, each of said two ends of said folding-blade shaft being rotatably mounted in a respective one of said side walls in said folding drum, said folding-blade shaft having at least two folding-blade carriers for holding folding blades *which are spaced apart from one another in a region proximate said carrier by a distance smaller than 10 millimeters*;

- a pair of bearings arranged in said side walls of said folding drum, said ends of said folding-blade shaft being mounted respectively in said side walls by said pair of bearings;

- at least one further bearing arranged in said carrier, wherein said folding-blade shaft is further rotatably supported

in said carrier by said at least one further bearing between said ends of said folding-blade shaft,
wherein said pair of bearings and said at least one further bearing comprise self-aligning roller bearings.

Emphasis added.

The Rejections

The Examiner acknowledges that none of the prior art discloses, teaches, or suggests spacing the folding blades apart from one another by a distance smaller than 10 millimeters as set forth in claims 1 and 14.

Nonetheless, the Examiner concludes that:

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to space the folding blades apart by 10 millimeters to improve the fold quality or to accommodate the change in material characteristics or change in working conditions because since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.¹

Ans. 4.

Contentions

Appellant contends that the Examiner's reliance on *Aller* is inappropriate because *Aller* "has nothing to do with determining the patentability of an apparatus claim." Br. 6.

¹ 220 F.2d 454, 456 (CCPA 1955).

OPINION

Issue

The determinative issue in this appeal is:

Did the Examiner err in concluding it would have been obvious to modify Schmidt's spacing to a distance smaller than 10 millimeters because Schmidt discloses the general conditions of the claims? In particular, did the Examiner correctly apply the *Aller* principle?

Analysis

The fundamental error of the Examiner lies in a misapplication of the holding in *Aller*.

In *Aller*, the claimed invention was a process for the production of phenol. *Aller*'s claimed process was identical with that of the prior art, except that *Aller*'s claims specified lower temperatures and higher sulphuric acid concentrations than are shown in the prior art reference to Hock and Lang. *Aller*, 220 F.2d 455. The court held "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *Aller*, 220 F.2d at 456 (citations omitted). In *Aller*, the court's conclusion of obviousness was based on the findings that (1) the prior art disclosed generally the claimed process to produce phenol and described one experiment and its results, and (2) any chemist reading the article could logically assume that higher yields might be obtainable, and by experimentally varying the conditions of temperature and acidity, could find the most productive conditions. *Id.* at 458.

Aller thus established two conditions for a conclusion of obviousness: one, the general conditions of the claim must be disclosed in the prior art,

and two, discovery of the optimum or workable range must be a matter of routine experimentation. We find *Aller* inapplicable to the facts of this case because neither of these two conditions is met.

First, the general conditions of the claim limitation that require the folding blades to be spaced apart by a distance smaller than 10 millimeters is not disclosed in the prior art. Schmidt fails to disclose any particular range of distance and the Examiner does not rely on Turner, Ryser, or Petrzalka to cure that deficiency. In contrast with *Aller*, where the elements were present in the prior art and differed only in quantities from the claimed process, here it is speculation and conjecture to find that the spacing is merely a difference in degree rather than in kind. *See Aller*, 220 F.2d at 456.

Second, even if Schmidt could be seen as disclosing the general conditions of the folding blades being spaced apart by a distance smaller than 10 millimeters, the holding in *Aller* does not apply because the Examiner has failed to sufficiently explain how any proposed modification of Schmidt's folding blades to be spaced apart by a distance smaller than 10 millimeters would be a *matter of routine experimentation* for a person having ordinary skill in the art. *See Aller*, 220 F.2d at 456. The Examiner reasons that it is a matter of design choice to space apart the folding blades by 10 millimeters "to improve the fold quality or to accommodate the change in material characteristics or change in working conditions" (*see* Ans. 4) because "it has been held that ... discovering the optimum or workable ranges involves only *routine skill* in the art" (*see* Ans. 4 (emphasis added) (citing *Aller*)). However, *Aller* speaks of routine experimentation rather than routine skill, and the Examiner does not appear to have made any finding that varying the blade spacing would have been the subject of

routine experimentation nor adequately articulated why selecting the claimed spacing would have been an obvious design choice. *See* Ans. 4, 7-8.

CONCLUSION

Accordingly, the Examiner erred in applying the principle set forth in *Aller* to the facts of this case.

DECISION

The Examiner's decision to reject claims 1, 2, 5, 8, and 10-19 is reversed.

REVERSED

mls

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